

IN THE CLAIMS:

- 1 1. (Original) A method of regulating methanol concentration in a direct methanol
2 fuel cell system comprising:
 - 3 providing a concentration regulator, coupled to a source of methanol or a source
 - 4 of water or both, and responsive to a control signal for increasing or decreasing the con-
 - 5 centration of methanol supplied to a fuel cell;
 - 6 periodically short-circuiting a load driven by said fuel cell;
 - 7 sensing the short circuit current produced by said fuel cell;
 - 8 comparing said sensed current to a reference; and
 - 9 generating said control signal in response to said comparison.
- 1 2. (Original) The method as in claim 1 wherein one or more of said sensing, com-
2 paring and generating steps is performed by a microprocessor or microcontroller.
- 1 3. (Withdrawn) A direct methanol fuel cell system comprising;
2 a direct methanol fuel cell;
3 a source of air or oxygen coupled to the fuel cell;
4 a source of methanol;
5 a source of water;
6 a detector for detecting changes in a short circuit current produced by said fuel
7 cell and responsively producing a control signal; and
8 a concentration regulator coupled to the methanol source or to the water source or
9 to both sources and said detector, said concentration regulator being responsive to said
10 control signal for varying the concentration of methanol in said fuel cell.
- 1 4. (Withdrawn) A direct methanol fuel cell system comprising;
2 a direct methanol fuel cell;

3 a source of air or oxygen coupled to the fuel cell;
4 a source of methanol;
5 a source of water;
6 a detector for detecting changes in a short circuit current produced by said fuel
7 cell and responsively producing a control signal; and
8 a concentration regulator coupled to the methanol source or to the water source or
9 to both sources, detector and anode of said fuel cell, responsive to said control signal for
10 varying the concentration of methanol in said fuel cell, and wherein said concentration
11 regulator comprises a metering valve, a pump, or a combination thereof.

1 5. (Previously Presented) A method of regulating methanol concentration in a direct
2 methanol fuel cell system comprising:
3 providing a concentration regulator, coupled to a source of methanol or a source
4 of water or both, and responsive to a control signal for increasing or decreasing the con-
5 centration of methanol supplied to a fuel cell;
6 sensing one of a group of fuel cell operating characteristics including potential
7 across a load driven by said fuel cell, potential across a portion of a fuel cell stack, po-
8 tential at a portion of an anode of said fuel cell which is proximate to an end of a metha-
9 nol flow path, an open circuit potential of said fuel cell, a short circuit current of said fuel
10 cell and, periodically, alternately sensing another one of said group of fuel cell operating
11 characteristics; and
12 using said alternately sensed operating characteristics to generate a control signal
13 directing said concentration regulator to control a concentration of methanol in said fuel
14 cell.

ELECTION IN RESPONSE TO RESTRICTION REQUIREMENT

Applicants hereby elect to prosecute Invention I, which includes claims 1, 2 and 5, drawn to a method, with traverse.

ALLOWABLE SUBJECT MATTER

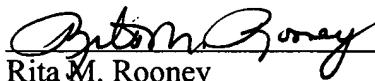
In the previous Office Action dated August 20, 2003, claims 1 and 2 were allowed (and claim 4 was objected to). Claims 3 and 4 are withdrawn herein in response to the Restriction Requirement.

Applicants respectfully submit that claim 5 was also previously amended to indicate that a control signal is generated, directing the concentration regulator to control concentration of methanol, in response to alternately-sensed operating characteristics. For the reasons set forth in the Response to Office Action dated November 20, 2003, Applicants hereby respectfully submit that claim 5, as amended, is also in condition for allowance.

Please do not hesitate to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,


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